

Coefficient of Friction		
Surfaces	Static Friction μ_s	Kinetic Friction μ_k
Steel on steel (dry)	0.6	0.4
Steel on steel (greasy)	0.1	0.05
Teflon on steel	0.041	0.04
Brake lining on cast iron	0.4	0.3
Rubber tires on dry pavement	0.9	0.8
Metal on ice	0.022	0.02
Rubber tip of crutch on rough wood	0.7	-

Different types of coefficient

The different types of friction are static, kinetic, deformation, molecular and rolling. Each has its own coefficient of friction.

Static coefficient

Static friction is the force that holds back a stationary object up to the point that it just starts moving. Thus, the static coefficient of friction concerns the force restricting the movement of an object that is stationary on a relatively smooth, hard surface.

Kinetic coefficient

Once you overcome static friction, kinetic friction is the force holding back regular motion. This, kinetic friction coefficient of friction concerns the force restricting the movement of an object that is sliding on a relatively smooth, hard surface.

Deformation coefficient

The deformation coefficient of friction concerns the force restricting the movement of an object that is sliding or rolling and one or both surfaces are relatively soft and deformed by the forces.

Molecular coefficient

Molecular coefficient of friction concerns the force restricting the movement of an object that is sliding on an extremely smooth surface or where a fluid is involved.

Rolling coefficient

The rolling coefficient of friction combines static, deformation and molecular coefficients of friction. This coefficient of friction can be made quite low. (See [Rolling Friction](#) for more information).

2 entries found for *coefficient of friction*.

coefficient of friction

n. pl. coefficients of friction

The ratio of the force that maintains contact between an object and a surface and the frictional force that resists the motion of the object.

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coefficient of friction

n : the ratio of the weight of an object being moved along a surface and the force that maintains contact between the object and the surface